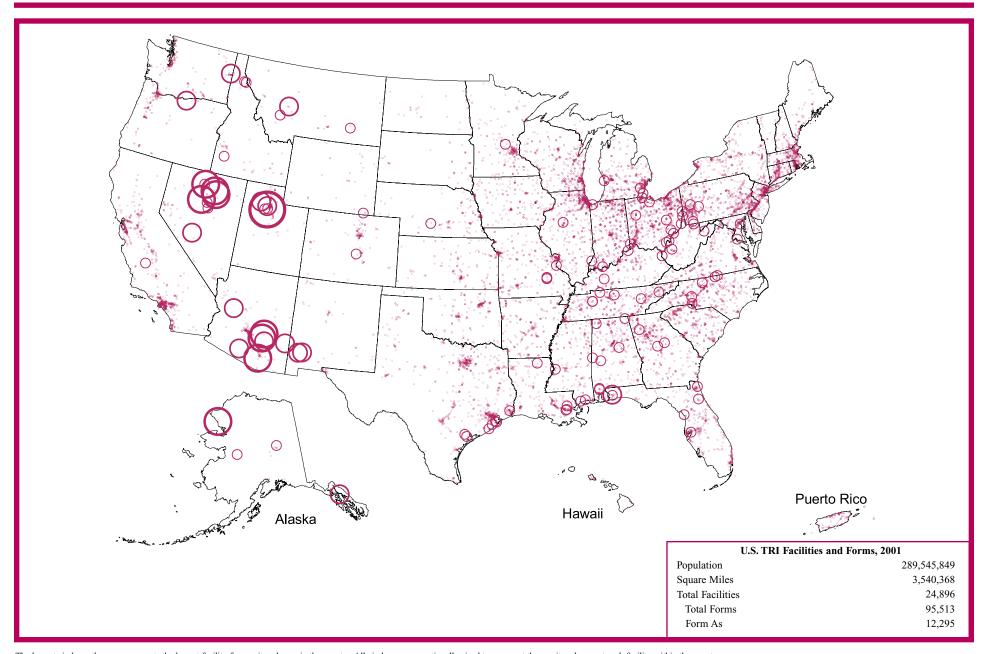


# **2001 Toxics Release Inventory**

## **UNITED STATES**



The largest circle on the map represents the largest facility for on-site releases in the country. All circles are proportionally-sized to represent the on-site releases at each facility within the country.



# **2001 Toxics Release Inventory**

## **UNITED STATES**

### Reported Releases and Other Waste Management Activities (in pounds)

	Total
On-site Releases	5,580,273,993
Air Emissions	1,679,373,058
Surface Water Discharges	220,796,115
Underground Injection Class I Wells	193,436,563
Underground Injection Class II-V Wells	21,987,723
On-site Land Releases to RCRA Subtitle C Landfills	138,220,131
Other On-site Land Releases	3,326,460,403
Off-site Releases (Transfers Off-site to Disposal)*	577,723,085
Total On- and Off-site Releases	6,157,997,078
Recycled On-site	7,558,346,576
Recycled Off-site	1,970,123,256
Energy Recovery On-site	2,646,959,925
Energy Recovery Off-site	826,420,385
Treated On-site	6,931,390,303
Treated Off-site**	626,325,057
Quantity Released On- and Off-site***	6,176,026,135
Total Production-related Waste Managed	26,735,591,638
Non-production-related Waste Managed	56,889,153
<b>Transfers Off-site for Further Waste Managem</b>	nent, including Disposal
Recycling	1,950,840,492
Energy Recovery	840,332,852
Treatment	279,686,495
Publicly Owned Treatment Works (POTWs)	339,913,774
Metals and Metal Category Compounds	2,211,172
Non-metal TRI Chemicals**	337,702,602
Other Off-site Transfers****	1,781,068
Other Off-site Transfers to Disposal (not including metals to POTWs)	664,339,613
Total Transfers Off-site for Further Waste Management, including Disposal	4,076,894,294

- \* Transfers to POTWs of metals and metal category compounds are included in off-site releases. Excludes transfer amounts sent for disposal to other TRI facilities reporting that amount released on-site.
- \*\* Transfers to POTWs of non-metals are included in treated off-site waste management activity.
- \*\*\* Excludes non-production-related releases; e.g. releases due to catastrophic events or remedial actions.
- \*\*\*\* Transfers reported without a valid waste management code.

#### For More Information . . .

EPA Headquarters Contact:
U.S. Environmental Protection Agency
Attn: TRI Program
MC: 2844T (EPA West, 5th Floor)
1200 Pennsylvania Ave., N.W.

Washington, D.C. 20460

To obtain TRI data and documents:

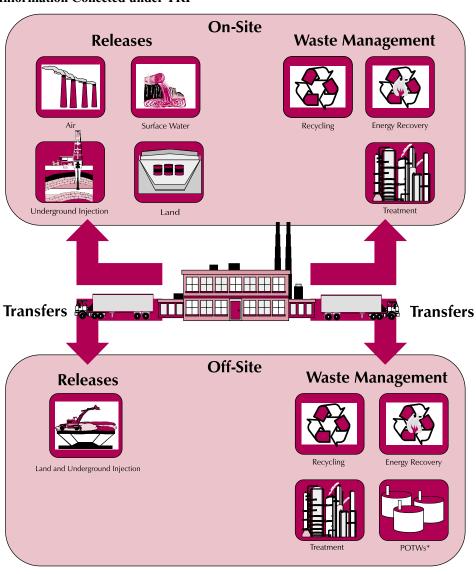
Phone: (202) 564-9554 E-mail: tridocs@epa.gov

URL: http://www.epa.gov/tri/tridata/tri01

To obtain TRI data use assistance, call TRI User Support Service (TRI-US):

Phone: (202) 566-0250 E-mail: tri.us@epa.gov

#### **Information Collected under TRI**



<sup>\*</sup>Publicly Owned Treatment Works



# **2001 Toxics Release Inventory**

## **UNITED STATES**

TRI On- and Off-site Releases, 2001	
On-site Releases	Pounds
Total Air Emissions	1,679,373,058
Fugitive Air Emissions	240,558,980
Point Source Air Emissions	1,438,814,078
Surface Water Discharges	220,796,115
Underground Injection	215,424,286
Class I Wells	193,436,563
Class II-V Wells	21,987,723
On-site Land Releases	3,464,680,533
RCRA Subtitle C Landfills	138,220,131
Other On-site Landfills	308,599,626
Land Treatment	14,122,290
Surface Impoundments	965,279,810
Other Disposal	2,038,458,676
Total On-site Releases	5,580,273,993
Off-site Releases	
Storage Only*	6,121,927
Solidification/Stabilization**	123,464,082
Metals and Metal Category Compounds Only	
Wastewater Treatment (Excluding POTWs)***	3,768,614
Metals and Metal Category Compounds Only	
Transfers to POTWs****	2,211,172
Metals and Metal Category Compounds Only	
Underground Injection	16,137,684
Landfills/Surface Impoundments	364,712,642
Land Treatment	7,263,730
Other Land Disposal	22,291,065
Other Off-site Management	15,606,659
Transfers to Waste Broker for Disposal	12,016,593
Unknown****	4,128,918
Total Off-site Releases	577,723,085
(Transfers Off-site to Disposal)	
Total On- and Off-site Releases	6,157,997,078

Note: On-site Releases are from Section 5 of Form R. Off-site Releases are from Section 6 (transfers off-site to disposal) of Form R. Off-site Releases include metals and metal category compounds transferred off-site for solidification/stabilization and for wastewater treatment, including to POTWs. Off-site Releases do not include transfers to disposal sent to other TRI facilities that reported the amount as an on-site release.

- \* Storage only (disposal code M10) indicates that the toxic chemical is sent off-site for storage because there is no known disposal method. Amounts reported as transferred to storage only are included as a form of disposal (off-site release).
- \*\* Beginning in reporting year 1997, transfers to solidification/stabilization of metals and metal category compounds (waste treatment code M41) are reported separately from transfers to solidification/stabilization of non-metal TRI chemicals (waste treatment code M40). Because this treatment method prepares a metal for disposal, but does not destroy it, such transfers are included as a form of disposal (off-site release). Reports under code M40 of metals and metal category compounds have been included in solidification/stabilization of metals and metal category compounds in this report.
- \*\*\* Beginning in reporting year 1997, transfers to wastewater treatment (excluding POTWs) of metals and metal category compounds (waste treatment code M61) are reported separately from transfers to wastewater treatment of non-metal TRI chemicals (waste treatment code M60). Because wastewater treatment does not destroy metals, such transfers are included as a form of disposal (off-site release). Transfers of metals and metal category compounds reported under code M60 have been included in transfers of metals and metal category compounds to wastewater treatment.
- \*\*\*\* Reported as discharges to POTWs in Section 6.1 of Form R. EPA considers transfers of metals and metal category compounds to POTWs as an off-site release because sewage treatment does not destroy the metal content of the waste material.

  \*\*\*\*\*\* Unknown (disposal code M99) indicates that a facility is not aware of the type of waste management used for the toxic chemical that is sent off-site. Amounts reported as unknown transfers are treated as a form of disposal (off-site release).

SIC Code	Industry	Total On- and Off-site	
		Releases*	
		Pounds	
10	Metal Mining	2,782,554,257	
12	Coal Mining	16,117,710	
20	Food	125,063,185	
21	Tobacco	3,563,517	
22	Textiles	6,961,084	
23	Apparel	401,226	
24	Lumber	31,415,989	
25	Furniture	8,008,810	
26	Paper	195,654,165	
27	Printing	19,719,402	
28	Chemicals	582,584,818	
29	Petroleum	71,384,317	
30	Plastics	88,535,433	
31	Leather	2,614,681	
32	Stone/Clay/Glass	40,460,674	
33	Primary Metals	558,588,679	
34	Fabricated Metals	64,018,394	
35	Machinery	15,359,651	
36	Electrical Equip.	23,934,03	
37	Transportation Equip.	80,629,94	
38	Measure./Photo.	9,375,2	
39	Miscellaneous	8,433,757	
	Multiple codes 20-39	103,926,308	
	No codes 20-39	13,763,561	
491/493	Electric Utilities	1,062,247,281	
5169	Chemical Wholesale Distributors	1,468,270	
5171	Petroleum Bulk Terminals/Bulk Storage	21,340,651	
7389/4953	Hazardous Waste/Solvent Recovery	219,872,011	
	Total for All Industries	6,157,997,078	

<sup>\*</sup> Includes transfers for disposal. Excludes transfer amounts sent for disposal to other TRI facilities reporting that amount released on-site.

### On-site and Off-site Releases for Top Five Chemicals Ranked on Total Releases in the Country (All Chemicals)

		On-site Releases				Off-site Releases	
			Surface		On-site	Transfers	Total Releases
CAS		Air	Water	Underground	Releases to	Off-site to	On- and
Number	Chemical	Emissions	Discharges	Injection	Land	Disposal*	Off-site**
		Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
_	Copper compounds	1,416,114	418,663	894,183	998,260,861	17,096,211	1,018,086,032
_	Zinc compounds	6,159,692	2,172,966	9,656,931	738,610,608	205,468,291	962,068,488
7647-01-0	Hydrochloric acid	587,134,079	2,445	48,570	188,608	746,442	588,120,144
_	Lead compounds	1,254,381	362,122	6,232,815	364,115,209	50,213,158	422,177,685
_	Manganese compounds	1,877,226	6,236,782	12,481,513	331,701,802	47,995,623	400,292,945

### On-site and Off-site Releases for PBT Chemicals Ranked on Total Releases in the Country

		On-site Releases				Off-site Releases	
			Surface		On-site	Transfers	Total Releases
CAS		Air	Water	Underground	Releases to	Off-site to	On- and
Number	Chemical	Emissions	Discharges	Injection	Land	Disposal*	Off-site**
		Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
_	Lead compounds	1,254,380.94	362,122.44	6,232,814.69	364,115,208.54	50,213,158.38	422,177,685.00
7439-92-1	Lead	378,740.71	51,297.37	6.65	15,304,665.99	5,079,312.56	20,814,023.27
_	Mercury compounds	125,764.77	1,463.42	9,315.75	4,484,228.72	151,567.27	4,772,339.93
_	Polycyclic aromatic compounds	1,146,126.02	16,384.58	332.40	159,816.95	1,536,544.27	2,859,204.23
1336-36-3	Polychlorinated biphenyls (PCBs)	1,359.90	2.80	0.00	2,491,162.15	12,251.02	2,504,775.86
79-94-7	Tetrabromobisphenol A	54,004.91	9.00	0.00	196,675.00	625,481.75	876,170.66
7439-97-6	Mercury	24,698.08	341.73	460.40	31,760.89	76,715.67	133,976.77
191-24-2	Benzo(g,h,i)perylene	31,455.26	685.17	2.65	8,569.61	86,240.63	126,953.32
40487-42-1	Pendimethalin	3,573.66	195.00	0.00	29,017.00	46,702.21	79,487.87
118-74-1	Hexachlorobenzene	1,199.39	321.61	22.02	23,524.57	11,107.40	36,174.98
1582-09-8	Trifluralin	2,896.17	1.00	115.00	17,113.70	2,390.11	22,515.98
57-74-9	Chlordane	15.49	80.00	0.00	3,630.30	331.61	4,057.40
8001-35-2	Toxaphene	42.34	6.29	0.14	3,073.89	854.53	3,977.18
608-93-5	Pentachlorobenzene	69.10	132.70	1.48	2,349.90	206.32	2,759.50
29082-74-4	Octachlorostyrene	0.00	0.12	0.00	193.00	508.60	701.72
465-73-6	Isodrin	0.35	0.00	0.00	19.00	441.40	460.75
72-43-5	Methoxychlor	25.19	0.00	0.00	334.69	95.93	455.81
_	Dioxin and dioxin-like compounds	6.37	4.08	0.33	116.36	200.88	328.01
_	Dioxin and dioxin-like compounds (in grams)	2,887.571	1,850.869	148.152	52,771.401	91,100.805	148,758.799
76-44-8	Heptachlor	6.04	0.00	0.00	271.69	28.24	305.97
309-00-2	Aldrin	0.31	0.00	0.00	0.00	1.07	1.38

<sup>\*</sup> Excludes amounts transferred to other TRI facilities in the country reporting that amount released on-site.

<sup>\*\*</sup> The chemical ranking is based on the amounts in this column.

